=> d his

(FILE 'HOME' ENTERED AT 13:50:26 ON 30 NOV 2004)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, ...' ENTERED AT 13:50:43 ON 30 NOV 2004

SEA (ALPHA AMYLASE)	
14	FILE ADISCTI
4	FILE ADISINSIGHT
1	FILE ADISNEWS
2849	FILE AGRICOLA
444	FILE ANABSTR
86	FILE ANTE
12	FILE AQUALINE
207	FILE AQUASCI
1424	FILE BIOBUSINESS
109	FILE BIOCOMMERCE
1486	FILE BIOENG
9968	FILE BIOSIS
3385	FILE BIOTECHABS
3385	FILE BIOTECHDS
2130	FILE BIOTECHNO
4722	FILE CABA
213	FILE CANCERLIT
18596	FILE CAPLUS
1121	FILE CEABA-VTB
5	FILE CEN
48	FILE CIN
193	FILE CONFSCI
152	FILE CROPB
225	FILE CROPU
387	FILE DDFB
990	FILE DDFU
4634	FILE DGENE
441	FILE DISSABS
387	FILE DRUGB
145	FILE DRUGMONOG2
1052	FILE DRUGU
22	FILE EMBAL
3477	FILE EMBASE
2051	FILE ESBIOBASE
38	FILE FEDRIP
2	FILE FOMAD
61	FILE FOREGE
2023	FILE FROSTI
4582	FILE FSTA
6314	FILE GENBANK
29	FILE HEALSAFE
1262	FILE IFIPAT
4	FILE IMSDRUGNEWS
6	FILE IMSPRODUCT
3	FILE IMSRESEARCH
1835	FILE JICST-EPLUS
11	FILE KOSMET
2694	FILE LIFESCI
4742	FILE MEDLINE
54	FILE NIOSHTIC
60	FILE NTIS
1	FILE NUTRACEUT
70	FILE OCEAN

```
             5117   FILE PASCAL
               17   FILE PCTGEN
               14   FILE PHAR
                2   FILE PHARMAML
               44   FILE PHIN
              264   FILE PROMT
                8   FILE PROUSDDR
                4   FILE RDISCLOSURE
             7773   FILE SCISEARCH
             2383   FILE TOXCENTER
             6826   FILE USPATFULL
              420   FILE USPAT2
               23   FILE VETB
              113   FILE VETU
               18   FILE WATER
             2402   FILE WPIDS
                8   FILE WPIFV
             2402   FILE WPINDEX
L1               QUE (ALPHA AMYLASE)
                 ---------

     FILE 'CAPLUS, BIOSIS, SCISEARCH, PASCAL, MEDLINE, CABA, FSTA, EMBASE,
     BIOTECHDS, AGRICOLA, LIFESCI, WPIDS, TOXCENTER, BIOTECHNO, ESBIOBASE'
     ENTERED AT 13:52:26 ON 30 NOV 2004
L2          4895 S L1 AND (VARIANT OR MUTANT)
L3             0 S L2 AND (118K OR R118K)
L4             0 S L2 AND (320K OR R320K OR POSITION 320 OR RESIDUE 320)
L5             0 S L2 AND (R458 OR R458K OR POSITION 458 OR AMINO ACID 458 OR R
L6             0 S L1 AND (R118K)

=> log Y
```

Field: **Title**

Items 1 - 3 of 3 One pa

1: Igarashi K, Hatada Y, Ikawa K, Araki H, Ozawa T, Kobayashi T, Ozaki K, Ito S. Related Articles, Li

Improved thermostability of a Bacillus alpha-amylase by deletion of an arginine-glycine residue is caused by enhanced calcium binding.
Biochem Biophys Res Commun. 1998 Jul 20;248(2):372-7.
PMID: 9675143 [PubMed - indexed for MEDLINE]

2: Lohinai Z, Burghardt B, Zelles T, Varga G. Related Articles, Li

The effect of L-arginine/nitric oxide pathway on salivary amylase secretion in conscious rats.
J Physiol Paris. 1997 May-Oct;91(3-5):217-21.
PMID: 9403798 [PubMed - indexed for MEDLINE]

3: Abe J, Sidenius U, Svensson B. Related Articles, Li

Arginine is essential for the alpha-amylase inhibitory activity of the alpha-amylase/subtilisin inhibitor (BASI) from barley seeds.
Biochem J. 1993 Jul 1;293 (Pt 1):151-5.
PMID: 8328958 [PubMed - indexed for MEDLINE]

h cb h g e e e fcg e ch b e

About Entrez

Text Version

Entrez PubMed
Overview
Help | FAQ
Tutorial
New/Noteworthy
E-Utilities

PubMed Services
Journals Database
MeSH Database
Single Citation Matcher
Batch Citation Matcher
Clinical Queries
LinkOut
Cubby

Related Resources
Order Documents
NLM Catalog
NLM Gateway
TOXNET
Consumer Health
Clinical Alerts
ClinicalTrials.gov
PubMed Central

Field: **Title**

- Search History will be lost after eight hours of inactivity.
- To combine searches use # before search number, e.g., #2 AND #6.
- Search numbers may not be continuous; all searches are represented.
- Click on query # to add to strategy

Search	Most Recent Queries	Time	Res
#5	Search **#1 AND #4** Field: **Title**	10:24:38	
#4	Search **arginine** Field: **Title**	10:24:24	114
#3	Search **#1 AND #2** Field: **Title**	10:23:19	
#2	Search **arginine OR lysine** Field: **Title**	10:23:08	182
#1	Search **amylase** Field: **Title**	10:22:57	60

Clear History

h cb hg e e e fcg b e

1: Biochem Biophys Res Commun. 1998 Jul 20;248(2):372-7. Related Articles, L

Improved thermostability of a Bacillus alpha-amylase by deletion of an arginine-glycine residue is caused by enhanced calcium binding.

Igarashi K, Hatada Y, Ikawa K, Araki H, Ozawa T, Kobayashi T, Ozaki K, Ito S.

Tochigi Research Laboratories of Kao Corporation, 2606 Akabane, Ichikai, Haga, Tochi 321-3497, Japan.

alpha-Amylase from alkaliphilic Bacillus KSM-1378 (LAMY) is a novel semi-alkaline enzyme which has a high specific activity, a value 5-fold higher than that of a Bacillus licheniformis enzyme at alkaline pH. Thermostability of this enzyme could be improved deletion of the Arg181-Gly182 residue by means of site-directed mutagenesis. The wild-type and engineered LAMYs were very similar with respect to specific activity, pH-activ curve, temperature-activity curve, susceptibility to inhibitors, and pattern of hydrolysis products from soluble starch and maltooligosaccharides. However, the engineered enzym also acquired increased pH stability and resistance to sodium dodecyl sulfate and especia chelating reagents, such as ethylenediaminetetraacetate and ethyleneglycol-bis (beta-aminoethylether)tetraacetate. This is the first report that thermostability of alpha-amylas improved by enhanced calcium binding to the enzyme molecule. Copyright 1998 Academ Press.

PMID: 9675143 [PubMed - indexed for MEDLINE]

h cb hg e e e fcg c e e e b b e b c

Display Abstract Show: 20 Sort Send to Text

1: Biochem J. 1993 Jul 1;293 (Pt 1):151-5. Related Articles, L

Arginine is essential for the alpha-amylase inhibitory activity of the alpha amylase/subtilisin inhibitor (BASI) from barley seeds.

Abe J, Sidenius U, Svensson B.

Department of Chemistry, Carlsberg Laboratory, Copenhagen Valby, Denmark.

Treatment of barley alpha-amylase/subtilisin inhibitor (BASI) with reagents specific for arginine, histidine, methionine and tyrosine residues and amino and carboxyl groups indicates that an arginine residue(s) is essential for its action on the target enzyme barley alpha-amylase 2. Phenylglyoxal modified eight out of 12 arginine residues in BASI. Kinetic analysis shows that the inactivation of BASI follows a pseudo-first-order reactio and is due to reaction with one molecule of phenylglyoxal; the second-order rate constan determined to be 2.95 M-1.min-1. At pH 8.0, BASI and barley alpha-amylase 2 form an inactive 1:1 complex. The Ki value of this association is 2.2 x 10(-10) M. The alpha-amylase protects four arginine residues and also the alpha-amylase inhibitory activity of BASI against phenylglyoxal. When BASI from the phenylglyoxal-modified target enzym inhibitor complex is isolated and subjected to a second treatment with phenylglyoxal, fo additional arginine residues are modified, with concomitant loss of the inhibitory activity These results are discussed in relation to a three-dimensional model of BASI based on th known structure of the corresponding inhibitor from wheat.

PMID: 8328958 [PubMed - indexed for MEDLINE]

Display Abstract Show: 20 Sort Send to Text

h cb hg e e e fcg c e e e b b e b c

Field: **Title**

Display Summary Show: 20 Sort Send to Text

Items 1 - 3 of 3 One pa

1: Igarashi K, Hatada Y, Ikawa K, Araki H, Ozawa T, Kobayashi T, Ozaki K, Ito S. Related Articles, Li

Improved thermostability of a Bacillus alpha-amylase by deletion of an arginine-glycine residue is caused by enhanced calcium binding.
Biochem Biophys Res Commun. 1998 Jul 20;248(2):372-7.
PMID: 9675143 [PubMed - indexed for MEDLINE]

2: Lohinai Z, Burghardt B, Zelles T, Varga G. Related Articles, Li

The effect of L-arginine/nitric oxide pathway on salivary amylase secretion in conscious rats.
J Physiol Paris. 1997 May-Oct;91(3-5):217-21.
PMID: 9403798 [PubMed - indexed for MEDLINE]

3: Abe J, Sidenius U, Svensson B. Related Articles, Li

Arginine is essential for the alpha-amylase inhibitory activity of the alpha-amylase/subtilisin inhibitor (BASI) from barley seeds.
Biochem J. 1993 Jul 1;293 (Pt 1):151-5.
PMID: 8328958 [PubMed - indexed for MEDLINE]

h cb h g e e e fcg e ch b e